

REMARKS/ARGUMENTS

In the Office action mailed June 11, 2010, claims 20 – 27 were rejected and claims 28 – 33 were deemed allowable. Applicant hereby requests reconsideration of the application in view of the below-provided remarks. No claims have been amended, canceled, or added.

Allowable Subject Matter

Applicant appreciates the Examiner's review of the claims and determination that claims 28 – 33 recite allowable subject matter. While the Office action provides a statement of reasons for the indication of allowable subject matter, the statement is directed to specific aspects of certain claims and not necessarily all of the claims. Applicant notes that the comments may have paraphrased the language of the claims and it should be understood that the language of the claims themselves set out the scope of the claims. Thus, it is noted that the claim language should be viewed in light of the exact language of the claim rather than any paraphrasing or implied limitations thereof.

Claim Rejections under 35 U.S.C. 103

Claims 20 – 27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Utsunomiya et al. (U.S. Pat. No. 6,359,326, hereinafter Utsunomiya) in view of Lien (U.S. Pat. No. 5,723,822, hereinafter Lien). However, Applicant respectfully submits that claims 20 – 27 are patentable over Utsunomiya in view of Lien for the reasons provided below.

Claim 20

Claim 20 recites:

“A semiconductor component comprising a semiconductor chip made of a doped silicon substrate, which chip is doped into a semiconductor device and structured, and comprises;

a reinforcing system formed directly on the doped silicon substrate in an open grid structure within a contact window, wherein the open grid structure

forms individual grid openings that leave portions of the doped silicon substrate exposed within the contact window; and

a connection metallization formed in between the open grid structure of the reinforcing system and directly on the doped silicon substrate at the exposed portions of the doped silicon substrate in the contact window;

wherein the reinforcing system and the connection metallization have different physical properties.” (emphasis added)

As recited in claim 20, the semiconductor component has a reinforcing system formed directly on the doped silicon substrate in an open grid structure within a contact window, wherein the open grid structure forms individual grid openings that leave portions of the doped silicon substrate exposed within the contact window. A connection metallization is formed in between the open grid structure of the reinforcing system and directly on the doped silicon substrate at the exposed portions of the doped silicon substrate in the contact window.

A prima facie case of obviousness has not been established because the Office action has not provided an articulated reasoning with some rational underpinning

In order to establish a *prima facie* rejection of a claim under 35 U.S.C. 103, the Office action must present a clear articulation of the reason why the claimed invention would have been obvious. MPEP 2142 (citing *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007)). The analysis must be made explicit. *Id.* Additionally, rejections based on obviousness cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *Id.*

Thus, there are at least three criteria that must be satisfied in order to establish a *prima facie* case of obviousness:

- 1) The rejection must include a conclusion that the claimed invention would have been obvious.
- 2) The rejection must include articulated reasoning to support the asserted conclusion of obviousness.
- 3) The articulated reasoning must be based on some rational underpinning.

Applicant submits that the Office action does not establish a *prima facie* rejection of claim 20 because the articulated reasoning is not based on a rational underpinning. In particular, the articulated reasoning lacks a rational underpinning because the reasoning is technically deficient.

In regard to the technical aspects of the proposed combination of Utsunomiya and Lien, Applicant submits that the Office action does not provide any technical analysis to show how the teachings of Lien might actually be applied to the semiconductor device of Utsunomiya. With respect to proposed combination, the Office action generally states:

“It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teachings of Lien into the device of Utsunomiya in order to have a reinforcing system formed in an open grid structure within a contact window, therefore, resulting in the open grid structure forms that leave portions of the doped silicon substrate exposed within the contact window at the exposed portions of the doped silicon substrate in the contact window and the reinforcing system and the connection metallization have different physical properties for improved bonding.” (Office action, page 3) (emphasis added)

As indicated above, the Office action refers generally to incorporating the teachings of Lien into the device of Utsunomiya “in order to have a reinforcing system formed in an open grid structure within a contact window.” Although the Office action makes a general assertion that the teachings of Lien could be applied to the semiconductor device of Utsunomiya “in order to have a reinforcing system formed in an open grid structure within a contact window,” the modifications that would be necessary to adapt the teachings of Lien to the semiconductor device of Utsunomiya are not apparent. Moreover, the reasoning in the Office action does not even attempt to explain how the teachings of Lien might be applied to the semiconductor device of Utsunomiya. Because the Office action does not provide any technical analysis to show how the teachings of Lien might actually be applied to the semiconductor device of Utsunomiya, the articulated reasoning in the Office action is technically deficient and therefore lacks a rational underpinning. Without a rational underpinning, Applicant asserts that a *prima facie* case of obviousness has not been established with respect to claim 20.

A *prima facie* case of obviousness has not been established because Utsunomiya in view of Lien does not teach every limitation of the claim

In addition to the above-provided argument, Applicant asserts that a *prima facie* case of obviousness has not been established with respect to claim 20 because Utsunomiya in view of Lien does not teach every limitation of the claim. In the Office action, Utsunomiya is cited for teaching:

“most aspects of the instant invention except a reinforcing system formed in an open grid structure within a contact window, wherein the open grid structure forms that leave portions of the doped silicon substrate exposed within the contact window at the exposed portions of the doped silicon substrate in the contact window, and ‘the reinforcing system and the connection metallization have different physical properties’.” (Office action, page 2)

Lien is cited for teaching that which is lacking in Utsunomiya.

Applicant asserts that a *prima facie* case of obviousness has not been established because Utsunomiya in view of Lien does not teach every limitation of the claim.

The Office action states that Utsunomiya teaches an “electrode pad (26).” However, it is not clear whether the “electrode pad (26)” is cited to correspond to the claimed “reinforcing system” or to the claimed “connection metallization.” Applicant respectfully requests clarification of this point in any subsequent action.

The Office action cites the bond wire (5) (see Fig. 1) of Utsunomiya as teaching the claimed “connection metallization.” However, the bond wire (5) shown in Fig. 1 of Utsunomiya is clearly not formed “directly on the doped silicon substrate” as is the case for the connection metallization in claim 20.

The Office action appears to cite to Lien as teaching the “reinforcing system...” as recited in claim 20. In particular, the Office action cites to the metal layer (312) as being formed in an open grid structure (see Figs. 6 and 7). However, Lien does not teach a reinforcing system “formed in between the open grid structure of the reinforcing system and directly on the doped silicon substrate at the exposed portions of the doped silicon substrate in the contact window,” (emphasis added) as recited in claim 20. With reference to Fig. 6, Lien teaches a metal layer (312). The metal layer (312) is not formed in between an open grid structure as it is shown as a monolithic layer with no openings. Additionally, the metal layer (312) is not formed directly on the doped silicon substrate (201, 202, 203). Lien does disclose raised structures (324, 325, and 326). However, the

raised structures (324, 325, and 326) are formed on the insulating layer (207) and are not formed directly on the doped silicon substrate (201, 202, 203). Therefore, Applicant asserts that Lien does not teach the “reinforcing system...” as recited in claim 20, nor does Lien remedy the shortcoming of Utsunomiya.

For at least the reasons provided above, Applicant asserts that Utsunomiya in view of Lien does not teach every limitation of claim 20. Therefore, Applicant asserts that a *prima facie* case of obviousness has not been established with respect to claim 20.

Dependent Claims 21 – 27

Claims 21 – 27 are dependent on claim 20. Applicant respectfully asserts that claims 21 – 27 are allowable at least based on an allowable claim 20.

CONCLUSION

Applicant respectfully requests reconsideration of the claims in view of the new claims and the remarks made herein. A notice of allowance is earnestly solicited.

Generally, in this Amendment and Response, Applicant has not raised all possible grounds for (a) traversing the rejections of the Action or (b) patentably distinguishing any new claims (i.e., over the Cited References or otherwise). Applicant however, reserves the right to explicate and expand on any ground already raised and/or to raise other grounds for traversing and/or for distinguishing, including, without limitation, by explaining and/or distinguishing the subject matter of the Application and/or any cited reference at a later time (e.g., in the event that this Application does not proceed to issue with the claims as herein amended, or in the context of a continuing application).

Applicant submits that nothing herein is, or should be deemed to be, a disclaimer of any rights, acquiescence in any rejection, or a waiver of any arguments that might have been raised but were not raised herein, or otherwise in the prosecution of this Application, whether as to the original claims or as to any of the new claims, or otherwise. Without limiting the generality of the foregoing, Applicant reserves the right to reintroduce one or more of the original claims in original form or otherwise so as to claim the subject matter

of those claims, both/either at a later time in prosecuting this Application or in the context of a continuing application.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-4019** pursuant to 37 C.F.R.

1.25. Additionally, please charge any fees to Deposit Account **50-4019** under 37 C.F.R.

1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

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